

Town of Lexington

Community Development

Phone: (781) 862-0500 Fax: (781) 861-2780

REQUEST FOR PROPOSALS

The Town of Lexington seeks Proposals from qualified Noise Engineers to provide peer review services as required by the Special Permit with Site Plan Review- Findings of Fact and Decision for the property known as 100, 200, 300, 400, 500, and 600 Patriot Way and 125 Spring Street ("Lexington Technology Park" or "LTP") filed with the Lexington Town Clerk on April 9, 2010 (hereinafter "SPSP") in accordance with the Scope of Services set forth below.

Proposal Submission Deadline: Friday August 27, 2010.

Submit Proposal to: Garry A. Rhodes, Building Commissioner
Office of Community Development
1625 Massachusetts Avenue, Lexington, MA 02420

Please address all correspondence to the address above and questions to:
Garry A. Rhodes (781) 862-0500 x214

Proposal Submissions:

- Proposers shall submit a price quotation, including estimated budget, hourly rate(s) and costs subject to reimbursement.
- Proposers shall also submit evidence of the following:
 - The Consultant must be (or the individuals employed by the Consultant who would perform the services to be provided hereunder must be) a member of the National Council of Acoustical Consultants (NCAC) or a board certified member of the Institute of Noise Control Engineering (INCE).
 - The Consultant shall submit three references, including principal contact person, address and telephone, for consultant work substantially similar to the services requested in this Proposal.
 - The Consultant shall submit resume(s) for the lead noise analyst and for any team member(s) who will perform substantial aspects of the services. The Proposal and/or resumes shall show a minimum of five(5) years experience in the field of noise analysis.

Enclosures to assist in developing your Proposal include:

- SPSP (N.B. Condition 15(a) on page 19 of 28)
- Shire HGT Ambient Sound Level Assessment Protocols (rev. 0.1 March 11, 2010) ("March 11 Methodology")
- Ambient Sound Level Assessment dated June 16, 2010 by Acentech ("June 16 Assessment") (N.B. Condition 15 (d) on page 19 of 28 of the SPSP)
- Code of the Town of Lexington Chapter 80 "Noise Control" ("Noise By-Law")

SCOPE OF SERVICES

The Consultant shall provide peer review services to the Town of Lexington Board of Appeals for the review of (i) the methodology for determining the ambient noise levels for Lexington Technology Park, as detailed in the March 11 Methodology, as more fully described in Conditioned 15(a) on page 19 of the SPSP; and (ii) the methodology of a report to be submitted to the Town pursuant to Condition 15(e) of the SPSP relative to the sound related to operations at 200 Patriot Way (currently under construction).

I. Peer Review Services required by the Town under this contract include:

- 1) The Consultant shall become familiar with the general layout of the subject property and adjacent Shade Street area.
- 2) Review enclosures as provided in the "Request for Proposals".
- 3) Initial meeting with the Building Commissioner and others.
- 4) Review the March 11 Methodology. Provide a written report to the Board of Appeals on whether the methodology set forth therein is a reasonable methodology, given the facts and circumstances of Lexington Technology Park, for determining the ambient noise levels for Lexington Technology Park. [See "SPSP" pg 19 of 28 (a)].
- 5) If it is determined that the March 11 Methodology is not a reasonable methodology for determining ambient noise levels, then, in the report to be submitted in accordance with Item 4, provide to the Board of Appeals a recommendation as to what modifications to the March 11 Methodology would be required to make the methodology reasonable (as so modified, the methodology is referred to below as the "Modified March 11 Methodology").
- 6) After completion of the tasks outlined in Item 4 and, if required, Item 5, above, review the June 16 Assessment. Provide a second report to the Zoning Board of Appeals determining whether the June 16 Assessment was prepared in compliance with either the March 11 Methodology or the Modified March 11 Methodology, as appropriate. If the June 16 Assessment was not prepared in compliance with the March 11 Assessment or the Modified March 11 Assessment, as appropriate, specify what additional work is required to supplement the June 16 Assessment so as to bring it into compliance with the appropriate standard.
- 7) Meet with the Building Commissioner and others to review findings.

- 8) After the report with respect to 200 Patriot Way required by Condition 15(e) of the SPSP (the "Building 200 Assessment") has been submitted to the Town by the Applicant/Property Owner, review the Building 200 Assessment to determine whether it complies with the Noise By-Law, with reference to the ambient sound levels determined in accordance with either the March 11 Methodology or the Modified March 11 Methodology, as appropriate. If the Building 200 Assessment does not appropriately determine whether Building 200 complies with the Noise By-Law, please specify what additional work is required to supplement the Building 200 Assessment so as result in a determination of whether Building 200 complies with the Noise By-Law.
- 9) Final meeting with the Building Commissioner and others to review your findings with respect to Building 200.

II. Additional peer review services may include:

- 1) Attendance at site visits.
- 2) Attendance at additional public meetings or hearings.
- 3) Review of additional materials.
- 4) Preparation of a Supplemental Letter of Report or response to comments.
- 5) Participation in meetings with the applicant, applicant's representatives and Board of Appeals as part of the review process and at the explicit request of the Board.
- 6) Provide assistance with decisions and appeals.

These additional services should be included in the price quote as hourly rates.

III. Schedule:

The initial report shall be completed no later than 2 weeks, or a mutually agreeable timeframe, from the Notice to Proceed.

IV. Phase II:

- 1) Provide testing of this or other sites in town for noise violations as defined by the Code of the Town of Lexington § 80 "Noise Control". Hourly rates should be provided. The cost will be paid by the town independently of this peer review.

IV. Insurance Requirements:

WORKMEN'S COMPENSATION: As required by the laws of The Commonwealth of Massachusetts.

GENERAL LIABILITY: Bodily Injury and Property Damage Liability \$500,000.00 each occurrence and \$500,000.00 aggregate, combined single limit or \$500,000.00/\$500,000.00 with a \$500,000.00 aggregate. Prior to commencement of the work under this RFP, the Consultant shall provide certificates of such insurance, which shall name the Town of Lexington as an additional insured.

AUTOMOBILES & TRUCKS: Including hired and non-owned vehicles. Bodily injury liability \$500,000.00 each person and \$500,000.00 each accident.

PROPERTY DAMAGE LIABILITY: \$100,000.00

Reuter Associates ^{LLC}

CONSULTANTS IN ACOUSTICS

P.O. Box 4623
Portsmouth, NH 03802
603-430-2081

August 23, 2010

Garry A. Rhodes, Building Commissioner
Office of Community Development
1625 Massachusetts Avenue
Lexington, MA 02420

SUBJECT: Proposal for peer review of Shire HGT Sound Level Assessment

Dear Mr. Rhodes,

Thank you for providing the Request for Proposals related to the expansion of Shire HGT at the Lexington Technology Park.

I have prepared the enclosed proposal for your consideration.

Please feel free to contact me if you have any questions.

Sincerely,



Eric L. Reuter, INCE Bd. Cert.
Principal

***PROPOSAL FOR ACOUSTICAL CONSULTING
PEER REVIEW SERVICES***

related to

***SHIRE HGT / LEXINGTON TECHNOLOGY PARK
SPECIAL PERMIT with SITE PLAN REVIEW***

prepared for the

**Town of Lexington
Office of Community Development**

by

**Eric L. Reuter, INCE Bd. Cert.
Reuter Associates, LLC**

Reuter Associates LLC
CONSULTANTS IN ACOUSTICS

P.O. Box 4623
Portsmouth, NH 03802
603-430-2081

MEMBER FIRM, NATIONAL COUNCIL OF ACOUSTICAL CONSULTANTS

Scope of Services and Estimated Fees

Following are the tasks detailed in the Request for Proposals, with the requested pricing, schedule, and insurance information provided.

I. Peer Review Services required by the Town

The table below details the estimated fees associated with each of the 9 tasks itemized under Section I in the RFP. The following estimated of required labor represent the maximum expected effort. Actual cost are likely to be somewhat less.

<i>Item</i>	<i>Summary</i>	<i>Estimate</i>	<i>Total</i>
1	Site Orientation, including site visit	4 hours labor @ \$150/hr Travel	\$600 \$50
2	Review Enclosures provided in RFP	4 hours labor	\$600
3	Meeting with Building Commissioner	4 hours labor Travel	\$600 \$50
4 & 5	Prepare report reviewing March 11 Methodology, including, if necessary, recommendations for modifications to methodology.	8 hours labor	\$1200
6	Prepare report reviewing June 16 Assessment for compliance with March 11 Methodology, or, if appropriate, Modified March 11 Methodology. Specify additional work if required for compliance.	8 hours labor	\$900
7	Meeting with Building Commissioner to review findings	4 hours labor Travel	\$600 \$50
8	Review of Building 200 Assessement for compliance with the Town Noise By-Law with reference to ambient levels determined in accordance with the March 11 or Modified March 11 Methodology, as appropriate.	8 hours labor	\$1200
9	Final meeting with Building Commissioner to review findings with respect to Building 200.	4 hours labor Travel	\$600 \$50
Total for Phase I Itemized Tasks			\$6800

II. Additional Peer Review Services

Any additional tasks, such as those outlined in Section II of the RFP, will be charged based on a hourly rate of \$150 and travel expense of \$50 per visit to Lexington. A rate sheet is attached.

III. Schedule

As requested, the initial report shall be completed no later than 2 weeks, or a mutually agreeable timeframe, from the Notice to Proceed.

IV. Phase II

Field testing of this or other sites in Lexington for noise violations as defined by the Code of the Town of Lexington would be charged based on a hourly rate of \$150 and travel expense of \$50 per visit to Lexington. Instrumentation charges are included on the attached rate sheet.

V. Insurance Requirements

Reuter Associates, LLC, a New Hampshire corporation, is exempt from Workers' Compensation under New Hampshire law on the grounds that it has only one employee.

Reuter Associates, LLC holds all other required insurance, and will provide certificates naming the Town of Lexington as an additional insured upon receipt of Notice to Proceed and prior to commencement of work.

Qualifications

Principal Eric L. Reuter will be conducting all work proposed herein, and has the following qualifications and associations:

- *Board Certified Member*, Institute of Noise Control Engineering
- *Member and Board of Directors*, National Council of Acoustical Consultants
- *Member*, Acoustical Society of America
- *Member and Past Section Chair*, Audio Engineering Society

Eric L. Reuter has 12 years of experience as a consultant in environmental noise control, including work on more than 200 such projects. Approximately half of these have been in the Commonwealth of Massachusetts and subject to DAQC Policy 90-001.

A complete resume and list of representative projects is attached.

References

As requested, below are three projects that involved either peer review work, adherence with the MADEP/DAQC Policy 90-001, or both. A list of additional representative environmental noise projects is attached.

1. Town of Littleton, MA – Peer Review for Aggregate Industries Quarry Expansion

Reuter Associates LLC provided peer review on behalf of the Littleton Planning Board of the noise section of a Special Permit Application for relocation and expansion of processing equipment at this existing quarry. The applicant was required to demonstrate compliance with DAQC Policy 90-001 and the Town of Littleton noise bylaw.

Contact: Maren Toohill
Planning Administrator
41 Shattuck Street
Littleton, MA 01460
978-540-2425

2. USA Springs – Peer Review for Proposed Water Bottling Plant

The Town of Nottingham, NH hired Reuter Associates, LLC to provide peer review for a proposed groundwater bottling facility, surrounded by residential abutters. Our work led to extensive redesign of the site to mitigate noise impacts from building mechanical systems, process equipment and trucking. In lieu of local criteria, the MADEP policy was used as a guideline.

Contact: John Gilbert
(has changed companies – current contact information given)
Synchrony Advisors, LLC
36 Dwinell Drive
Concord, NH 03301
603-219-6538

3. FLO Chemical – Chemical Plant Process Noise Study

FLO Chemical Corporation produces zein for use in food and pharmaceuticals. Upgrades to process equipment generated noise complaints, and MADEP required that the equipment be brought into compliance with DAQC Policy 90-001. Reuter Associates, LLC conducted ambient and equipment sound level measurements, and provided recommendations for noise control to reduce process equipment noise to acceptable levels.

Contact: Bob Karpiuk
Flo Chemical Corp
20 Puffer Street
Ashburnham, MA 01430
978-827-5101

Eric L. Reuter

Education

Worcester Polytechnic Institute, BS Electrical Engineering
BS Humanities and Arts: Music

Professional Affiliations

Institute of Noise Control Engineering – Board Certified Member
National Council of Acoustical Consultants – Board of Directors
Acoustical Society of America – Member
Audio Engineering Society – Member and Past Boston Section Chair

Eric L. Reuter has more than a decade of experience as a consultant and educator in acoustics and audio. Mr. Reuter founded Reuter Associates, LLC in Portsmouth, NH in 2001 to provide consulting services in architectural and environmental acoustics and noise control, and has held the position of Assistant Professor at the Berklee College of Music in Boston since 2000, where he has taught courses in acoustics and audio technology to nearly 2000 students.

Mr. Reuter is an expert in modeling, field assessment and abatement of environmental noise. He has managed or otherwise contributed to more than 200 environmental noise projects, including construction, telecommunications facilities, power generation facilities, trucking facilities, quarry operations, highway noise, rail and aircraft noise, building mechanical systems, and recreational facilities.

Reuter also has extensive experience in architectural acoustics, including room acoustics, sound isolation, noise control of building mechanical systems, and speech privacy. Reuter is an active member of the ANSI S12 Working Group 44 (Healthcare Acoustics, Speech Privacy & LEED), a group working to develop an ANSI Standard on speech privacy for compliance with HIPAA in healthcare facilities.

Reuter is a Board Certified Member of the Institute of Noise Control Engineering, and serves on the Board of Directors of the National Council of Acoustical Consultants.

Prior to forming Reuter Associates, LLC, Reuter was a consultant at Cavanaugh Tocci Associates, Inc. in Sudbury, MA from 1999 to 2001. In 2003, he was hired by the New England Institute of Art in Brookline, MA to design and teach a course in acoustics for its newly-chartered Bachelor of Arts program. He remained an adjunct faculty member until 2005. Reuter has also delivered several guest lectures on architectural acoustics at the Thayer School of Engineering at Dartmouth College and at Worcester Polytechnic Institute.

Representative Projects – Environmental Noise

FedEx Ground

Environmental Noise Modeling

As Federal Express has expanded their Ground division over the past several years, Reuter Associates has provided modeling of environmental noise propagation for more than two-dozen new trucking facilities throughout the United States. This modeling served to project community noise impacts of both trucking and processing noise, and ensure regulatory compliance. Reuter Associates also provided field assessment of existing noise levels for many of these projects.

Thibeault Quarry

Quarry Noise Study

Reuter Associates was hired by the North Lamprey Neighbors Association in Raymond, NH to provide guidance to the planning board on the potential noise impacts of a quarry operation. This long-dormant quarry was slated for reopening, but several new communities have been built since it last operated. Impacts considered included blasting, crushing, loading, and both on-site and over-the-road trucking. The permit was denied on the basis of noise and other potential pollutants.

Kahuna Laguna

Indoor Water Park Environmental Noise Study

Kahuna Laguna is an indoor water park in North Conway, NH. Abutters were concerned about impact from mechanical system noise. Our work involved measurement of baseline community noise levels, modeling of noise impact from air-handling and process equipment serving the water park, and design of appropriate noise control.

Verizon Central Offices

Environmental Noise Impact Studies

Reuter Associates has worked for Verizon on community noise impact studies for more than 20 central office mechanical systems upgrades throughout New England. Security concerns have led to emergency generator upgrades, and the addition of co-locators has led to the need for HVAC upgrades. These projects generally include baseline community noise measurement, modeling of impacts from new equipment, and design of noise control when needed.

Reuter Associates ^{LLC}

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P.O. Box 4623
Portsmouth, NH 03802
603-430-2081

Rate Sheet

January 2010

Principal Consultant Labor \$150.00 / hour

Travel \$0.50 / mile
+ Tolls & Parking

Instrumentation

Handheld Octave-Band Sound Level Analyser \$100.00 / day

Unattended Sound Level Monitor \$75.00 / 24hr

Sound Isolation/Reverberation Measurement Equipment \$75.00 / day

All instruments conform to ANSI Type 1 specifications.

CAVANAUGH TOCCI ASSOCIATES, INCORPORATED

327 F BOSTON POST ROAD, SUDBURY, MA 01776-3027 TEL: (978) 443-7871 FAX: (978) 443-7873 E-MAIL: gtocci@cavtocci.com

SENIOR PRINCIPALS

WILLIAM J. CAVANAUGH, FASA, Emeritus
GREGORY C. TOCCI, PE, FASA, PRESIDENT

PRINCIPALS

DOUGLAS H. BELL
LINCOLN B. BERRY
TIMOTHY J. FOULKES, FASA, INCE, Bd. Cert.
MATTHEW J. MOORE, CTS

ADMINISTRATOR

DONNA L. RAFUS

SENIOR AND STAFF CONSULTANTS

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ANDREW C. CARBALLEIRA
WILLIAM J. ELLIOT, LEED AP
AARON M. FARBO, LEED AP
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CHRISTOPHER A. STORCH

MARKETING MANAGER

PATRICIA A. CASASANTO

ASSOCIATED CONSULTANTS

NICHOLAS BROWSE, SMPTE
STEWART RANDALL, CTS-D
MARTIN CALVERLEY, CTS

August 24, 2010

Mr. Garry A. Rhodes, *Building Commissioner*
Office of Community Development
Town of Lexington
1625 Massachusetts Avenue
Lexington, MA 02420

Subject: Proposal of Services

Dear Mr. Rhodes,

Services for:

Peer Review—Lexington Technology Park
Ambient Sound Level Assessment dated June 16, 2010

Services requested:

The following responds to Town of Lexington Request for Proposal. Due date August 18, 2010.

Phase I. Peer Review Services Required by the Town

1. Become familiar with LTP and surrounding residential areas.
2. Review RFP enclosures
3. Meet with Building Commissioner and others
4. Prepare written peer review of Shire HGT protocol dated March 11, 2010 known as the "March 11 Methodology."
5. Prepare written revisions and/or improvements to the Shire HGT protocol to better determine the ambient sound level at neighboring residences as is appropriate; this will be known as the "Modified March 11 Methodology."
6. Review June 16 Assessment included with the RFP. Prepare written review ascertaining conformance or non-conformance of the June 16 Assessment to the March 11 Methodology or to the Modified March 11 Methodology. Provide scope of additional work to augment that of the June 16 Assessment as appropriate. This proposal only provides for defining the scope of work to be completed under separate authorization.
7. Meet with the Building Commissioner and others to review findings.
8. Prepare written review of the forthcoming 200 Patriot Way Building 200 Noise Assessment with respect to its adherence to the March 11 Methodology or the Modified March 11 Methodology and to its conformance with the Town of Lexington Noise By-Law. Prepare a

written scope of additional services to augment the forthcoming assessment if needed. This proposal only provides for defining the scope of work to be completed under separate authorization.

9. Meet with the Building Commissioner and others to review findings on 200 Patriot Way Noise Assessment.

This proposal provides 4 meetings/field visits; additional meetings and field visits are not included in this scope of work. This proposal provides 4 written reports; additional reports are not included in this scope of work.

Not included in this proposal are additional peer review services identified in the RFP. If these additional services or other are requested and authorized, they will be billed on a time and materials basis and billed to the Town of Lexington at the rates and in accordance with the attached fee schedule.

Phase II. Additional §80 Noise Control Violation Measurements

1. Measure existing sound levels as per Town of Lexington §80 Noise Control by-law to evaluate conformance.

If these additional services or other are requested and authorized, they will be billed on a time and materials basis and billed to the Town of Lexington at the rates and in accordance with the attached fee schedule.

Estimate Cost of Services

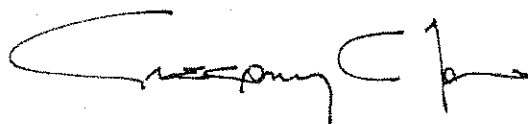
Meetings and field visits (Qty 4).....	\$3,700.00
Document Review and Reports (Qty 4)	\$4,500.00
Phase 1 Total	\$8,200.00

Costs are on the basis of all work to be provided in this proposal being completed by Gregory C. Tocci, P.E., INCE Bd. Cert. Subsequent work may involve the services of other CTA staff persons under the direction of Mr. Tocci who would serve as Principal-in-Charge for the firm.

Billings for services are as described in the attached fee schedule. Please approve by signature below or by separate written authorization. If we can provide any further information, please do not hesitate to contact us. Thank you.

Yours sincerely,
CAVANAUGH TOCCI ASSOCIATES, INC.

Approved:
Town of Lexington



Signature

Gregory C. Tocci, *President*

CAVANAUGH TOCCI ASSOCIATES, INCORPORATED

327 F BOSTON POST ROAD, SUDBURY, MA 01776-3027 TEL: (978) 443-7871 · FAX: (978) 443-7873 E-MAIL: gtocci@caytocci.com

Peer Review—Lexington Technology Park Ambient Sound Level Assessment dated June 16, 2010

Town of Lexington, Massachusetts

Consulting Arrangements:

Standard Schedule of Charges

For all consulting assignments, invoiced costs for services are based on professional staff time spent and out-of-pocket expenses incurred during the course of the project. Professional staff time is charged on an hourly basis in accordance with the following rates. These rates include all indirect labor and other firm overhead costs:

Senior Principal Consultants	\$200 - \$225 per hour
Principal Consultants	\$150 - \$200 per hour
Senior Consultants	\$120 - \$150 per hour
Staff Consultants	\$100 - \$120 per hour
Technical Assistants	\$60 per hour

Professional staff time for travel to and from field conferences, project site measurements, and inspection visits are billed on a portal-to-portal basis from our offices in Sudbury, Massachusetts.

Direct project expenses are billed at cost and include all costs incurred for measurement instrumentation, computer modeling software use, and other significant charges directly associated with the consulting assignment. Expenses are billed at direct cost with no markup.

Invoices for services are billed on a monthly basis and are due net 30.

Effective 01 January 2010

Peer Review and On-Call Noise Consulting Services

Proposal to the Town of Lexington, MA

August 26, 2010



Cross-Spectrum Labs

P.O. Box 90842

Springfield MA 01119

DUNS 18-468-0457

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1 Introduction

Cross-Spectrum Labs is pleased to present this proposal for peer review and on-call acoustical consulting services for the Town of Lexington, Massachusetts. We understand that the Board of Appeals requires assistance to review and access an ambient noise study prepared for a Site Plan Review of 200 Patriot Way at the Lexington Technology Park (Figure 1). We also understand that the Town wishes to contract with a firm to provide noise measurements and analyses at the Lexington Technology Park and other locations on an on-call basis to determine compliance with the Code of the Town of Lexington §80 "Noise Control."

Cross-Spectrum Labs proposes to perform the peer review tasks for the 200 Patriot Way ambient noise study as indicated in the Request for Proposals (RFP) and to perform on-call acoustical consulting services for the Town of Lexington.

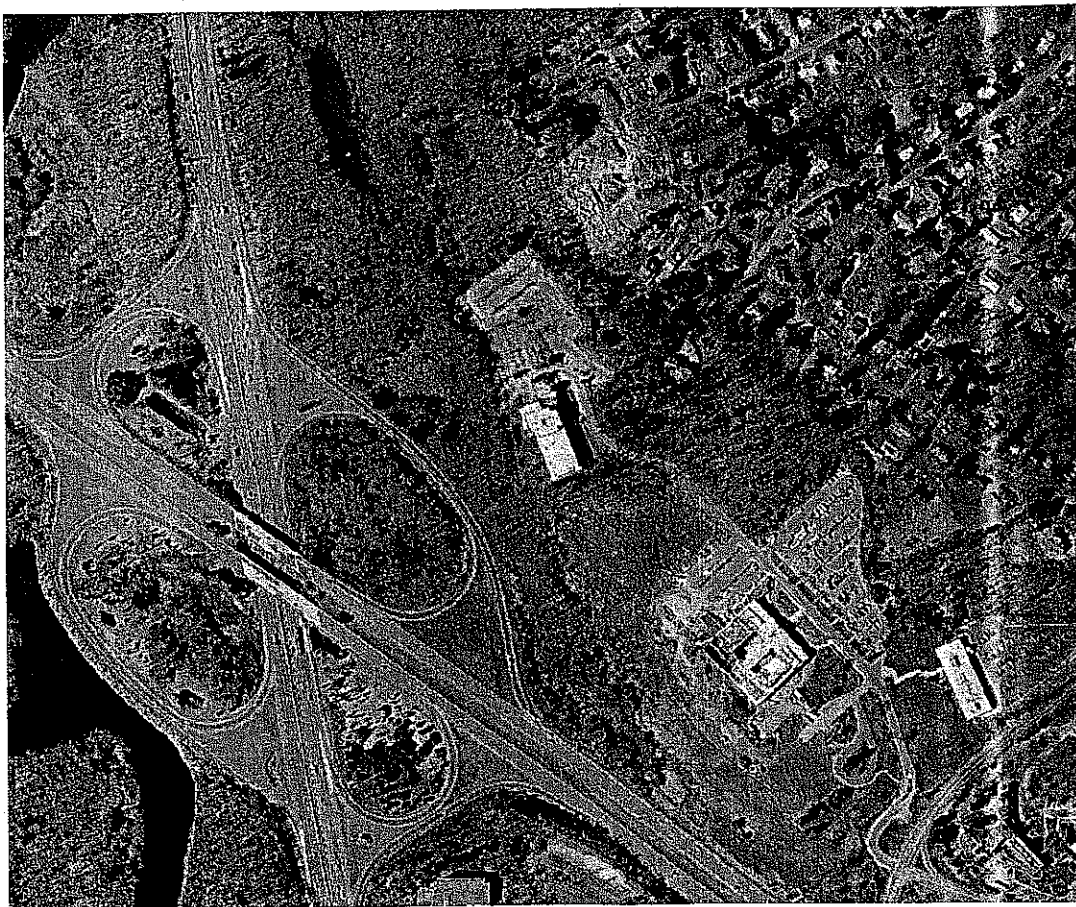


Figure 1. Lexington Technology Park project area (source: MassGIS).

2 Scope of Services

As specified in the RFP, the proposed tasks are divided into two phases:

1. Phase 1: Peer Review Services for the 200 Patriot Way ambient noise study and noise impact assessment.
2. Phase 2: On-call noise measurement and impact assessment services to determine compliance with Town of Lexington noise limits.

The tasks are described in detail in the following sections.

2.1 Phase 1: Peer Review Services

Upon receiving the Notice to Proceed, we will conduct the following tasks:

- Travel to the Lexington Technology Park to survey the project area and to tour the residences along Shade Street and other nearby streets as shown in Figure 1.
- Review applicable project documents including the Ambient Sound Level Assessment Protocols (dated March 11, 2010) prepared by Shire HGT, and the Ambient Sound Level Assessment (dated June 16, 2010) prepared by Acentech Inc.
- Meet with the Town of Lexington Building Commissioner and Town staff to discuss the project and objectives.
- Provide an initial written report on the effectiveness of the ambient noise measurement protocols proposed by Shire HGT and, if necessary, describe deficiencies in the methodology and describe specific modifications to the methodology to determine more representative ambient noise level data.
- Review the June 16 assessment prepared by Acentech (and, if necessary, other documents prepared as a result of a modified ambient noise measurement methodology) and prepare a second written report to assess whether the ambient noise analysis complies with the methodology. If the measurements are found to be not in compliance with the agreed-upon methodology, this report will identify the specific steps that should be taken to bring the assessment into compliance.
- Meet again with the Building Commissioner and Town staff to discuss the findings to date.
- Review the final noise impact assessment report submitted to the Town by the Project Applicant and determine if the project will meet the Town of Lexington noise code. A third written report will be submitted to confirm that the project will meet Town noise limits or, if necessary, identify additional steps required to meet Town requirements.
- Attend final meeting with the Building Commissioner and Town staff to review findings.

As noted in the RFP, we plan to submit the first written report no later than two weeks after we receive the Notice to Proceed.

Additional peer review services may include:

- Perform additional site visits.
- Attend public meetings in Lexington.
- Review supplemental materials.
- Prepare supplemental reports or written response to comments.
- Attend meetings with the applicant, representatives of the applicant, and/or Town staff at the request of the Board of Appeals.
- Consult with Town staff to provide assistance with town decisions and support the town during any appeals process.

2.2 Phase 2: On-Call Acoustical Measurements Services

Cross-Spectrum Labs also proposes to provide on-call acoustical measurement and analysis services as needed. We are prepared to perform long-term noise and/or vibration measurements, construction noise monitoring, architectural acoustical measurements, and other services as requested. We understand that these measurement services will be performed and billed independently of the peer review services described in Phase 1.

3 Costs

Estimated costs for the services solicited in the RFP are presented below.

3.1 Peer-Review Services

Table 1 provides a breakdown of the estimated labor costs for the specific project tasks identified in the RFP. The total estimated costs for the scope described in Section 2.1 is \$3,000. Additional peer review services will be billed at an hourly rate of \$100 per hour; tasks requiring travel to Lexington will also include a \$200 charge (two hours at \$100 per hour) for travel time.

Table 1. Estimated Costs for Peer Review Services*

Task	Hours	Rate	Cost
Visit Project Area & Review Project Documents	4 [†]	\$100	\$400
Initial meeting w/ Bldg Commissioner	4 [†]	\$100	\$400
Review March 11 Methodology & Prepare Initial Report	4	\$100	\$400
Review June 16 Assessment & Prepare Written Analysis	4	\$100	\$400
Meet w/ Bldg Commissioner to Review Findings to Date	4 [†]	\$100	\$400
Review Bldg 200 Impact Assessment & Prepare Written Peer Review	6	\$100	\$600
Final Meeting w/ Bldg Commissioner	4 [†]	\$100	\$400
Total Labor Cost			\$3,000

* Additional services will be billed at \$100 per hour

[†] Includes Travel Time

3.2 On-Call Acoustical Consulting Services

Cross-Spectrum Labs will provide on-call acoustical measurement and analysis services at a flat rate of \$100 per hour. We charge a fee of \$200 (two hours labor at \$100 per hour) for each site visit in addition to other labor costs to cover travel time. We generally do not charge for other travel expenses. We do not charge for instrumentation use unless a particular task requires measurements to be performed at more than three locations simultaneously; for these tasks, we will rent additional equipment and rental charges will be billed under this contract. A written cost estimate for rental equipment will be provided to the Town as necessary.

Typical costs for on-call consulting services will vary depending on the tasks required to meet the objectives. Based on our previous experience performing acoustical consulting services for town boards, costs per project will likely range from \$800 to \$2,500. We will provide a written cost estimate upon request and we will require a written Notice To Proceed before starting any work.

4 Capabilities

Cross-Spectrum Labs is capable of performing a wide variety of noise and vibration measurements. Our laboratory includes two long-term noise monitoring systems, a handheld sound level meter, accelerometers, acoustical calibrators, and PC-based analysis systems. We can perform long-term (multiple-day) unattended measurements, short-term attended measurements, room acoustics measurements (to determine indoor sound quality, privacy, etc), measurements of transportation noise and vibration, and measurements of indoor and outdoor noise sources such as air conditioning units, and pumps. All acoustical measurement equipment meet or exceed American National Standards Institute (ANSI) Type 1 and Type 2 standards for Precision/General Purpose measurement equipment.

Our library contains a variety of reference standards, including ANSI, ASTM, International Organization for Standardization (ISO), World Health Organization (WHO), Massachusetts Department of Environmental Protection (MassDEP) and International Electrotechnical Commission (IEC) standards related to community noise assessments. Our library also includes reference material that we use to build computer models used to predict and analyze noise levels in a variety of contexts.

5 Insurance Requirements

Cross-Spectrum Labs carries General Liability, Professional Liability (Errors & Omissions), and Automobile Liability insurance in accordance to the requirements set forth in the RFP. As a Massachusetts Sole Proprietorship with no employees, Cross-Spectrum Labs is not required to carry Workmen's Compensation insurance, and therefore does not carry that insurance.

Insurance certificates will be provided to the Town upon request.

6 Personnel

The work in this scope would be performed by Herbert Singleton Jr, P.E., proprietor of Cross-Spectrum Labs. Mr. Singleton has extensive experience with assessing noise impact for construction, industrial, and transportation projects for Federal, state and local agencies, corporations, institutions and private clients in dozens of jurisdictions across the United States. He is a member of the National Council of Acoustical Consultants, a registered Professional Engineer (Mechanical) in Massachusetts, and Treasurer of the Greater Boston Chapter of the Acoustical Society of America. He has represented project advocates and project opponents before planning, zoning, and select boards and he has testified as an expert witness in trials.

Mr. Singleton is former resident of Lexington, having resided at 439 Marrett Rd from 1999 to 2002 and is familiar with the Spring Street corridor. Although currently living in western Massachusetts, Mr. Singleton frequently travels to the Boston area for a variety of business and personal purposes, including attendance of a Lexington Community Education class held at the Lexington High School. A résumé for Mr. Singleton is presented in the appendices of this proposal.

Cross-Spectrum Labs is certified by the Massachusetts State Office of Minority and Women Business Assistance (SOMWBA) as a a Minority-owned Business Enterprise (MBE). Renewal of our Disadvantaged Business Enterprise (DBE) certification is in progress.

A Professional Qualifications

Professional résumé for:

- Herbert Singleton Jr, PE

Selected Project Descriptions:

Audio Industry

- Soundwave Research Labs, Ashland MA: *Performed microphone frequency response measurements for published specifications.*

Architectural Acoustics

- Massachusetts Bay Transportation Authority, Boston MA: *Performed Public Address system measurements & evaluation as part of PA system upgrade project.*
- Donoghue, Barrett & Singal, P.C., Boston MA: *Evaluated office privacy/partition sound insulation at law offices, and recommended measures to increase speech privacy between offices.*
- MISCfit Studio, Salem MA: *Evaluated acting studio acoustical properties, and made recommendations to increase speech intelligibility while reducing noise in adjacent spaces.*
- Nonotuck Community School, Florence, MA: *Analyzed auditorium acoustical properties and recommended detailed mitigation measures to reduce reverberation to acceptable limits.*

Noise & Vibration Control

- Town of Billerica MA: *Supported town engineer by reviewing developer permit application and predicting HVAC noise levels for permit application process.*
- Chelmsford Housing Authority: *Measured noise from an excessively loud chiller unit and performed detailed design of noise mitigation measures.*
- F.L. Roberts & Co., Springfield MA: *Performed car wash noise assessments in Springfield MA and Farmington CT, and provided litigation support.*
- Southeastern Pennsylvania Transportation Authority, Philadelphia PA: *Performed vibration monitoring for demolition project.*
- Verizon Wireless, Longmeadow MA: *Performed noise measurements and noise predictions, and provided public meeting support for cellular phone tower special permit application.*

Training

- Federal Transit Administration, Washington D.C./National Transit Institute, New Brunswick, NJ: *Developed course material and helped teach FTA's Transit Noise and Vibration Impact course.*

Projects in the Press/Media Appearances:

- Lisa Iannucci, "Soundproofing Solutions," *Multi-Housing News*, June 1, 2010
- Garret Keizer, *The Unwanted Sound of Everything We Want: A Book About Noise*. New York, NY: PublicAffairs, 2010. 204-209, 234, 236
- WBZ-TZ News, "Are Your Child's Loud Toys Damaging To The Ears?," April 12, 2007
- Mac Daniel, "MBTA readies a garble-free pa system," *Boston Globe*, May 9, 2006
- Matt McDonald, "Sudbury neighbors squawk about chickens," *Boston Globe*, December 19, 2004



Herbert L. Singleton Jr., P.E. Principal

As founder of Cross-Spectrum Laboratories, Mr. Singleton has over 15 years of experience in acoustical measurements and modeling. His professional experience includes sound and vibration analysis for transportation, construction, and architectural projects. Mr. Singleton has directed field survey measurements and environmental assessments for private firms and public agencies across the United States. He has also evaluated the performance of audio equipment and acoustic transducers for quality control and comparison purposes.

Mr. Singleton is familiar with a broad range of sound and vibration measurement tools and methods including sound level meters, unattended monitoring hardware and digital acquisition systems. He has used a variety of signal processing and data analysis tools, and he has extensive experience with FFT and frequency analysis techniques. He has also instructed clients from public and private firms in the use of sound and vibration measurement tools for environmental assessments. Furthermore, Mr. Singleton is experienced in presenting measurement results to the lay public via public meetings and workshops.

Education:

MSc, Audio Acoustics, University of Salford (coursework ongoing)
S.B., Mechanical Engineering, Massachusetts Institute of Technology

Professional Affiliations:

Professional Engineer, MA #46867
Member, Institute of Noise Control Engineering
Member, National Council of Acoustical Consultants
Treasurer, Greater Boston Chapter/Acoustical Society of America

Presentations & Publications:

- Herbert Singleton Jr., "Community Perceptions and their Role in Noise Control: A Tale of One City," Proceedings of the 35th Inter-Noise, December 2006
- Dr. Carl Hanson and Herbert Singleton Jr., "Performance of Ballast Mats on Passenger Railroads: Measurement vs. Projections," *Journal of Sound and Vibration*, June 13 2006
- Herbert Singleton Jr., "Vibration Transfer Mobility Measurements Using Maximum Length Sequences," Proceedings of the 150th Meeting of the Acoustical Society of America, October 2005
- Herbert Singleton Jr., "Ground-Borne Vibration Characteristics of TransRapid TR08 Maglev," Presented at the 82nd Transportation Research Board Annual Meeting, January 2003

Representative Projects:

- Assessed public address system performance as part of the Massachusetts Bay Transit Authority PA system upgrade in its subway stations. Conducted Speech Transmission Index (STI) measurements for existing PA system, and assisted with design and acceptance testing for upgraded PA system.
- Performed noise assessments for F. L. Roberts & Co. Inc. of Springfield, Massachusetts. Measured noise from existing car wash facilities, and modeled noise at proposed car wash locations. Presented analysis results before city councils and planning boards in Massachusetts and Connecticut.
- Developed instructional material for the Federal Transit Administration's Transit Noise and Vibration Course, and instructed transit officials and environmental consultants from around the country on the FTA's noise & vibration impact assessment methods.

B Professional References

Project: Town of Billerica Engineering Support Services

Dates: November 2005 - March 2007

Location: Billerica, MA

Description: Under contract to Holmberg & Howe (and later, Cuoco & Cormier Engineering), Cross-Spectrum Labs provided peer review and acoustical consulting services to the town of Billerica, Massachusetts. Tasks included ambient noise measurements at development sites, reviewing developer submittals, modeling noise from proposed projects, and responding to questions from town boards.

Reference:

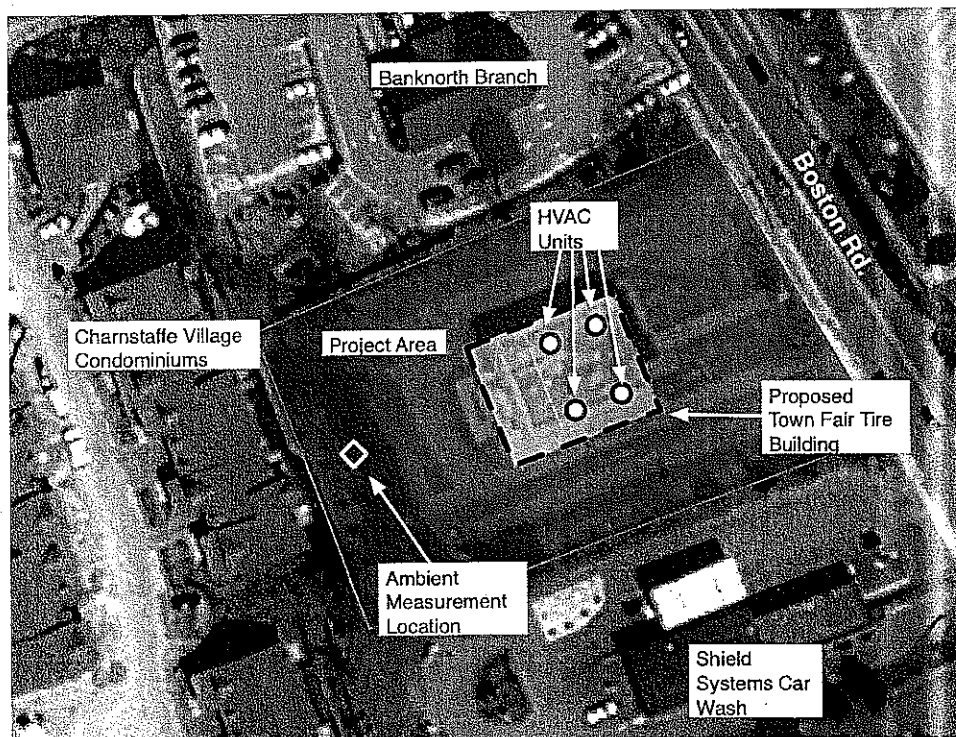
Jeffrey Rider, P.E.

Cuoco & Cormier Engineering

74 Northeastern Blvd, Unit 10A

Nashua NH 03062

(603) 882-1812



Billerica auto repair shop project layout prepared for a 2007 noise assessment

Project: Central Artery/Tunnel Acoustical Consulting Services

Dates: 1997 - 1999 (Employed at Harris Miller Miller & Hanson Inc.)

Location: Boston, MA

Description: As an employee of Harris Miller Miller & Hanson Inc., Mr. Singleton performed acoustical consulting services for the Central Artery/Tunnel engineering management joint venture of Bechtel Parsons Brinckerhoff. Duties included reviewing contractor noise control plans prepared by other acoustical consultants, monitoring construction noise levels to enforce project noise limits, and performing detailed studies of noise from backup alarms and vacuum excavators.

Reference:

Erich Thalheimer, INCE Bd. Cert.

Parsons Brinckerhoff Quade & Douglas, Inc.

75 Arlington Street, 9th floor

Boston MA 02116

(617) 426-7330

Project: Chelmsford Housing Authority Acoustical Consulting Services

Dates: February-July 2006, January-July 2010

Location: Chelmsford, MA

Description: Cross-Spectrum Labs was contracted by the Chelmsford Housing Authority to perform noise assessments and mitigation designs for heating, ventilation and cooling (HVAC) systems deployed at CHA facilities. Duties include noise measurements, source noise mapping, noise barrier design, and support services to project architects.

Reference:

David Hedison, Executive Director

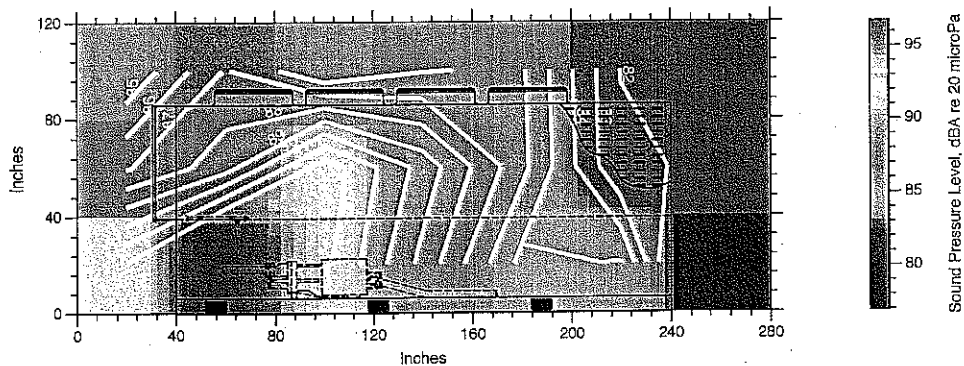
Chelmsford Housing Authority

10 Wilson Street

Chelmsford MA 01824

(978) 256-7425

Pressure Map: A-Weighted SPL



Noise map of outdoor chiller unit located at a Chelmsford Housing Authority property in Chelmsford MA.